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scheme have been provided for in the Third Plan and the total amount is nearly 2 times the amount of actual expenditure under the schemes during the Second Plan period.

Wherever necessary additional staff is sanctioned to cope with the increase in the volume of work relating to investigation of the sources and execution of the works.

APPENDIX VII

[Vide answer to Starred Question No. 1048 on page 344.]

THE PARAMBIKULAM-ALIYAR PROJECT.

I. *Project proposals.*

1. The Parambikulam-Aliyar Irrigation-*cum*-Hydel Project is to utilize the waters of eight rivers, viz., Nirar, Sholiar, Parambikulam. Tunachdavu, Peruvaripallam, Tekkadiar, Palar and Aliyar in the Anamalai Hills of the Coimbatore district for generation of power before the waters are utilized for irrigation. The reservoirs across Parambikulam and Tunacadavu (including Peruvaripallam and Tekkadiar) will be in Kerala State while those across the remaining rivers will be in Madras State. The Project takes its name after the two important rivers, Parambikulam representing the rivers on the west and Aliyar representing those on the east.

2. The Project consists of the following works :—

(i) A diversion masonry weir will be constructed across Nirar within Cinchona Plantation limits and the Nirar waters diverted into the neighbouring Sholiar Valley through an unlined tunnel.

(ii) A dam across the Sholiar with masonry section in the river portion flanked on sides by earth dams will be constructed A lined tunnel will lead the water from this reservoir to the Parambikulam basin.

(iii) A dam across the Parambikulam river will be built. This reservoir will be the main storage of the project. An unlined tunnel will lead the water from this reservoir to the Tunacadavu reservoir. This dam will be located in Kerala State.

(iv) Two dams across Tunacadavu and Peruvaripallam will be constructed with a common FRL forming a combined storage with an inter-connecting open cut. A dam will also be built across Tekkadi river and the water from the Tekkadi river will be led into the Tunacadavu reservoir through a short tunnel. Thus the Tunacadavu reservoir will receive the inflows from all the rivers These three dams will be located in Kerala State.

(v) A pressure tunnel to Sarkarpathy will take off from the Tunacadavu reservoir and lead the waters across the ridge of the eastern plains to the Madras State.

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(vi) A contour canal will be formed below the exit of the Sarkarpathy tunnel to discharge into the Tirumurthy reservoir across the river Palar. This canal will collect the bulk of the discharge from the Sarkarpathy tunnel and feed into Tirumurthy reservoir for irrigation.

(vii) A reservoir across Palar called Tirumurthy reservoir will be built. Two irrigation canals, Parambikulam Main Canal and Udumalpet Canal will take off from this reservoir to irrigate 187,251 acres. This reservoir will be receiving and storing part of the power discharges from the Sarkarpathy tunnel when there will be no irrigation and also meet the fluctuations in the irrigation demand due to seasonal conditions.

(viii) A storage reservoir across Aliyar will be built below Vannanthurai bridge. Two canals Pollachi and Vettaikaranpudur will take off from the reservoir to irrigate 36,591 acres in Aliyar Basin. This reservoir conserves the flows in Aliyar Basin as well as flows led down from the Contour Canal from time to time.

(ix) Aliyar Feeder Canal and Sethumadai Canal will take off directly below the exik of Sarkarpathy tunnel and irrigate about 8,950 acres.

(x) Small reservoirs will be formed at the tail end major canal and distributaries to pool the drainage water from the irrigated area and reuse it for irrigation. It is proposed to irrigate 7,208 acres from these reservoirs.

The above reservoirs will irrigate an area of 240,000 acres in Coimbatore district and will generate power at the following five hydel power stations with an installed capacity of 180,000 K.W. :—

(i) Sholiar Power House I with an installation of 2 units of 35 M.W. each.

(ii) Sholiar Power House II with a single unit of 20 M.W.

(iii) Sarkarpathy Power House with a single unit of 30 M.W.

(iv) Aliyar Power House I with a single unit of 40 M.W.

(v) Aliyar Power House II with a single uint of 20 M.W.

All these power stations will be located at the Anamalai Hills in Coimbatore district of the Madras State and the power generated will feed into the Madras Gird.

The estimated cost of the project is Rs. 36,21·75 lakhs. The Madras share of the cost is Rs. 3,508,.45 lakhs. The overall percentage return is expected to be 5·41 in the 10th year after completion.

II. *Progress of works.*

Aliyar Dam.—Masonry portion of the Aliyar Dam has almost been completed and water let down from the reservoir on 2nd October 1962 for irrigation has been for raising dry and wet cultivation in about 7,500 acres ,subject to availability of water.

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Parambikulam Dam.—Concreting the weak zone including cut off walls have been completed and masonry started in this region. Excavation work for the drain and terracing work for the horizontal filter area in Earth Saddle Dam portion completed.

Tirumurthy Dam.—The construction of surplus regulator, river sluice and canal sluice is in rapid progress.

Sholiar Dam.—Excavation of foundation for masonry is in progress.

Canals.—Uppar or Vettaikaranpudur Canal and Pollachi Canal take off from the Aliyar reservoir. Vettaikaranpudur Canal will be about 11 miles long to serve 13,162 acres and the Pollachi Canal about 21 miles and 4 furlongs to serve 23,429 acres all in Pollachi taluk.

Vettaikaranpudur Canal.—Its entire length has almost been completed. Lining is completd up to M. 7–4—440. Distributaries are also in progress.

Pollachi Canal.—Erathwork is in progress from M. 0/0 to 14/0 and about 16,916 units completed. Lining work is in prgress from 0/0 to 9/0 and about 5½ miles completed.

Aliyar Feeder and Sethumadai Canals.—Eight miles length of excavation in Aliyar Feeder Canal and three miles 6 furlongs length of excavation in Sethumadai Canal have been completed.

Contour Canal.—Works in Contour Canal are in various stages of progress. From the Tirumurthy reservoir two canals take off, viz., Parambikulam Mian Canal and Udumalpet Canal. The Parambikulam Main Canal and Udumalpet Canal. The Parambikulam Main Canal is 82 miles long to serve about 164,837 acres. acres. Udumalpet Canal which is about 18 miles long will serve 22,414 acres.

Excavation of Parambikulam Main Canal is in progress and is nearly completed and lining for about 2½ miles length in head reaches completed so far. Both the Parambukulam Main Canal and Udumalpet Caanal have been programmed to be completed along with the completion of the Contour Canal and connected tunnels.

III. *Benefits at a glance.*

Direct—

(i) Irrigation—Rice, millets, cotton, groundnut, fruits and vegetables—

Area irrigated—240,000 acres—

Rice	...	...	24,000 tons.
Millets	...	...	38,400 tons.
Cotton	...	...	7,400 tons.
Groundnut		...	9,600 tons.

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(ii) Pisciculture—In reservoirs—

Fish ... ... 140 tons

(iii) Power—

Firm energy ... 70,000 K.W.

Installed capacity. 1,80,000 K.W.

(iv) Drinking water—To towns and villages near the canals.

(v) Tourism—Recreational facilities at the different dam-sites.

	RUPEES IN CRORES.
(vi) Value of extra food and cotton produced per year	5·09
(vii) Amount of wealth produced 30 times gross electricity revenue	55·25
(viii) Total wealth produced for a year	60·34
	RS.
(xi) (a) Net revenue from irrigation ...	27,24,000
(b) Net revenue from power	1,54,20,000
(c) Annual revenue	1,81,44,000
(d) Direct return	5·17 per cent.

Indirect—

To State—Increased revenue through taxes, postal and rail traffic, saving in food imports, etc.

To people—Better living standards.'

APPENDIX VIII

[Vide answer to Starred Question No. 1055 on page 347.]

Answer—

(*a*) The Hon'ble Member is obviously referring to the Betelvine Research Station at Pothanur. This Station has been set up for studying in detail, the various causes, contributing to the spread of the betelvine wilt disease and for devising suitable measures to control it.

(*b*) The following results have been achieved as a result of the study under taken in the Station ;—

(*i*) Among the various fungicides tried, Bordeaux mixture was found to be more effective than others in controlling the disease ;

(*ii*) Drenching the soil at monthly intervals, commencing from the Second month after planting, has given better results as compared with drenching the soil once in two months and once in three months ;